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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/447,472	11/23/1999	JAMES B. ARMSTRONG	533/049	3863

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EXAMINER
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ART UNIT	PAPER NUMBER
2611	9

DATE MAILED: 01/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-24</u> is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-24</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
   application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

13)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application)
since a specific reference was included in the first sentence of the specification or in an Application Data Sheet.
37 CFR 1.78.

   a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific
reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2,3</u>.

4) ☐ Interview Summary (PTO-413) Paper No(s). _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: .

DETAILED ACTION

Claim Objections

1.   Claim 13 is objected to because of the following informalities: With regard to claim 13, the claim is dependent upon itself, and should be changed to depend on claim 12.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1-6, 10-15, & 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueno (Ueno et al., US006438596B1) in view of Hokanson (US006094680A).

With regard to claim 1, Ueno discloses an interactive information distribution system including a network of provider equipment (core network, 1002) and subscriber equipment (access networks, 1008 & 1009), apparatus comprising: a plurality of servers (1001, 1005, 1006) coupled to respective subscriber equipment (STUs, 1010-1013); and a manager (combination of 1003, 1004, 1007; see col. 21, lines 44-51), coupled to each of said plurality of servers. Ueno does not disclose each of said servers having a primary storage partition for storing a local portion of video assets, each of said servers having a secondary storage partition for storing at least some of a remaining portion of said video assets; and said

manager routes video assets between said servers in response to video asset requests, and migrates video assets between storage partitions in response to a video asset request rate traversing a threshold rate.

Hokanson discloses a server (132) with primary (high performing/high cost storage) and secondary (low performance/low cost) storage partitions (col. 9, lines 55-67) and a manager (142) for routing data between servers in response to client requests (col. 9, lines 48-54), and migrating data between storage partitions in response to a request rate traversing a threshold rate (a threshold is inherent in the distinction between content requested by a "large number of subscribers" and content that is "rarely" requested; see col. 11, lines 16-30), for the advantage of configuring the server resources to match consumer demand (col. 11, lines 30-40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Ueno to include servers having a primary storage partition, a secondary storage partition, and a manager for routing data between servers and migrating data between storage partitions in response to client requests, as taught by Hokanson, for the advantage of configuring the server resources to match consumer demand.

With regard to claim 2, Ueno and Hokanson together disclose the claimed subject matter. In particular, Hokanson discloses said manager allocates said video assets to at least one of said plurality of servers for storage on said primary partition when said asset request rate traverses said threshold rate (a threshold is inherent in the distinction between content requested by a "large number of subscribers" and content that is "rarely" requested; see col. 11, lines 16-30); and said manager stores said video assets on said secondary storage partition when said asset request rate does not traverse said threshold rate (col. 11, lines 16-30).

With regard to claim 3, Ueno and Hokanson together disclose the claimed subject matter. In particular, Ueno discloses in response to an asset request from subscriber equipment (1010), said manager (1003, 1004, 1007) distributes to said requesting subscriber equipment (1010) the requested video asset from a server storing the requested video asset (col. 19, lines 36-44).

With regard to claim 4, Ueno discloses a manager (1003, 1004, 1007) coupled to said plurality of servers (1001, 1005, 1006), said manager comprising: a stream session manager (server resources management control unit, 1003), for distributing streams of video assets to subscriber equipment requesting said video assets (col. 19, lines 49-53); and a content session manager (service control unit, 1007) for receiving asset requests from said stream session manager (col. 18, lines 58-63). Ueno does not disclose said manager comprises a content manager coupled to said plurality of servers for tracking, inventorying and administering said asset request rate and said threshold rate for each of said video assets;

Hokanson discloses a content manager (142) for tracking, inventorying and administering said asset request rate and said threshold rate for each of said video assets (col. 11, lines 9-23), for the advantage of configuring the server resources to match consumer demand (col. 11, lines 30-40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Ueno to include a content manager for tracking, inventorying and administering said asset request rate and said threshold rate, as taught by Hokanson, for the advantage of configuring the server resources to math consumer demands.

With regard to claim 5, Ueno and Hokanson together disclose the claimed subject matter. In particular, Ueno discloses an inter-server network (1002), coupled between each of said plurality of servers, for transmitting and receiving said video assets; and an access network (1008, 1009), coupled

between each of said plurality of servers and said respective subscriber equipment, for receiving asset requests and transmitting video assets.

With regard to claim 6, Ueno and Hokanson together disclose the claimed subject matter. In particular, Ueno discloses an apparatus and corresponding method comprising: a server, identified by a manager (server resources management control unit, 1003) as storing a requested video asset, provides said requested video asset to requesting subscriber equipment via said access network (col. 19, lines 48-53).

With regard to claim 10, Ueno discloses an interactive information distribution system including a network of provider equipment (core network, 1002) and subscriber equipment (access networks, 1008 & 1009), apparatus comprising: a plurality of local servers (1005, 1006); a remote server (1001); and a manager (combination of 1003, 1004, 1007; see col. 21, lines 44-51), coupled to each of said plurality of local servers and said remote server. Ueno does not disclose said manager routes video assets between said remote server, said plurality of servers, and said subscriber equipment in response to video asset requests, and migrates video assets between storage partitions in response to a video asset request rate traversing a threshold rate.

Hokanson discloses a server (132) with primary (high performing/high cost storage) and secondary (low performance/low cost) storage partitions (col. 9, lines 55-67) and a manager (142) for routing data between servers in response to client requests (col. 9, lines 48-54), and migrating data between storage partitions in response to a request rate traversing a threshold rate (a threshold is inherent in the distinction between content requested by a "large number of subscribers" and content that is "rarely" requested; see col. 11, lines 16-30), for the advantage of configuring the server resources to match consumer demand (col. 11, lines 30-40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Ueno to include servers having a primary storage partition, a secondary storage partition, and a manager for routing data between servers and migrating data between storage partitions in response to client requests, as taught by Hokanson, for the advantage of configuring the server resources to match consumer demand.

With regard to claim 11, Ueno and Hokanson together disclose the claimed subject matter. In particular, Ueno discloses storing video assets accessed less frequently on said remote server (1001). In addition, Hokanson discloses allocating video assets to at least one of said plurality of local servers (col. 9, lines 48-54), and storing said asset on said primary partition when said asset request rate exceeds said threshold rate (a threshold is inherent in the distinction between content requested by a "large number of subscribers" and content that is "rarely" requested; see col. 11, lines 16-30); and storing said video asset on said secondary storage partition when said asset request rate does not exceed said threshold rate (col. 11, lines 16-30).

With regard to claim 12, Ueno and Hokanson together disclose the claimed subject matter. In particular, Ueno discloses in response to an asset request from subscriber equipment (1010), said manager (1003, 1004, 1007) distributes to said requesting subscriber equipment the requested video asset from a local server (1005) storing the requested video asset (col. 19, lines 37-53).

With regard to claim 13, Ueno and Hokanson together disclose the claimed subject matter. In particular, Ueno discloses in response to an asset request from subscriber equipment (1010), said manager (1003, 1004, 1007) distributes to said requesting subscriber equipment (1010) the requested video asset from a server storing the requested video asset (col. 19, lines 36-44).

With regard to claim 14, Ueno and Hokanson together disclose the claimed subject matter. In particular, Ueno discloses an inter-server network (1002), coupled between each of said plurality of servers, for transmitting and receiving said video assets; and an access network (1008, 1009), coupled between each of said plurality of servers and said respective subscriber equipment, for receiving asset requests and transmitting video assets.

With regard to claim 15, Ueno and Hokanson together disclose the claimed subject matter. In particular, Ueno discloses said stream session manager (1003) causes transmission of said video assets across said access network (1008, 1009) to said subscriber equipment (col. 19, lines 48-53).

With regard to claim 19, Ueno discloses in an interactive information distribution system comprising: a plurality of servers (1001, 1005, 1006) coupled to respective subscriber equipment (STUs, 1010-1013), said servers providing video assets to respective subscriber equipment in response to subscriber requests and a manager (combination of 1003, 1004, 1007; see col. 21, lines 44-51). Ueno does not disclose each of said servers having a primary storage partition for storing a local portion of video assets, each of said servers having a secondary storage partition for storing at least some of a remaining portion of said video assets, determining an asset request rate for each of said video assets in the server; comparing said determined asset request rate with respective threshold rates, and in the case of video assets stored on a secondary partition having a request rate exceeding said respective threshold rate, migrating said video assets stored on said secondary partition to a corresponding primary partition.

Hokanson discloses an apparatus and corresponding method comprising: a server (132) with primary (high performing/high cost storage) and secondary (low performance/low cost) storage partitions (col. 9, lines 55-67) and a manager (142) for routing data between servers in response to client requests

(col. 9, lines 48-54), and migrating data between storage partitions in response to a request rate traversing

a threshold rate (a threshold is inherent in the distinction between content requested by a "large number of

subscribers" and content that is "rarely" requested; see col. 11, lines 16-30); said method including the

steps of determining an asset request rate for each of said video assets in the server (col. 11, lines 9-10);

comparing said determined asset request rate with respective threshold rates (col. 11, lines 16-20), and in

the case of video assets stored on a secondary partition having a request rate exceeding said respective

threshold rate, migrating said video assets stored on said secondary partition to a corresponding primary

partition (col. 11, lines 20-30), for the advantage of configuring the server resources to match consumer

demand (col. 11, lines 30-40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made

to modify the system of Ueno to include servers having a primary storage partition, a secondary storage

partition, and a manager for routing data between servers and migrating data between storage partitions in

response to client requests, as taught by Hokanson, for the advantage of configuring the server resources

to match consumer demand.

With regard to claim 20, Ueno and Hokanson together disclose the claimed subject matter. In

particular, Hokanson discloses an apparatus and corresponding method wherein said determined asset

request rate for video assets stored in a primary storage partition being below a respective threshold rate,

migrating said video assets from said primary partition to a corresponding secondary partition (a threshold

is inherent in the distinction between content requested by a "large number of subscribers" and content

that is "rarely" requested; see col. 11, lines 16-30).

With regard to claim 22, Ueno and Hokanson together disclose the claimed subject matter. In

particular, Ueno discloses an apparatus and corresponding method comprising: a server, identified by a

manager (server resources management control unit, 1003) as storing a requested video asset, provides said requested video asset to requesting subscriber equipment via said access network (col. 19, lines 48-53).

With regard to claim 23, Ueno and Hokanson together disclose the claimed subject matter. In particular, Ueno discloses said identified server is coupled directly to said requesting subscriber equipment (via channel 1019, col. 19, lines 48-53).

4.   Claims 7-9, 16-18, & 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueno and Hokanson as applied to claims 6, 15, & 23 above, and further in view of Kikinis (US006163795A).

With regard to claims 7, 16 and 24, Ueno and Hokanson together do not disclose said requested video asset is provided to said access network via an intervening server.

Kikinis discloses an apparatus and corresponding method providing a requested video asset (stored on a remote file server, e.g., 3, 5, or 7) to an access network (41, 43, & 45) via an intervening server (file server 1, is an intervening server in such cases where it resides between the source of a requested video asset, e.g., remote file server 3, 5, or 7, and the access network 41, 43 & 45 of the requesting subscriber), for the advantage of providing user access to a video asset not stored in the server for the access network of the requesting subscriber (file server 1) (col. 4, lines 16-32).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Ueno and Hokanson to include a providing a requested video asset to said access network via an intervening server, as taught by Kikinis, for the advantage of providing user access to a video asset not stored in said user's local server.

With regard to claim 8, Ueno and Hokanson together disclose the claimed subject matter. In particular, Ueno discloses said stream session manager (1003) causes transmission of said video assets across said access network (1008, 1009) to said subscriber equipment (col. 19, lines 48-53).

With regard to claim 17, Ueno and Hokanson together disclose the claimed subject matter. In particular, Ueno discloses said local (1005) server transmits said video asset across said access network (1008, 1009) to said subscriber equipment (1010) (col. 19, lines 48-53).

With regard to claims 9 and 18, Ueno discloses a plurality of servers (1001, 1005, 1006) correspondingly linked to said subscriber equipment. Ueno does not disclose said video asset is stored on said primary partition or secondary partition.

Hokanson discloses said video asset is stored on said primary storage partition or secondary storage partition (col. 10, lines 35-45), for the advantage of configuring the server to match consumer demands (col. 11, lines 30-40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Ueno to include said video assets stored on said primary storage partition or secondary storage partition, as taught by Hokanson, for the advantage of configuring the server to match consumer demands.

5.   Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ueno and Hokanson as applied to claim 19 above, and further in view of Kenner (Kenner et al., US006269394B1).

With regard to claim 21, Hokanson discloses storing duplicates of said video assets on said primary storage partition (col. 10, lines 1-8). Ueno and Hokanson together do not disclose removing duplicates of said video assets.

Kenner discloses removing duplicate data from a storage partition (col. 12, lines 35-40), for the advantage of maximizing available storage capacity.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Ueno and Hokanson to include removing said video assets from each of said primary storage partitions, as taught by Kenner, for the advantage of maximizing available storage capacity.

Conclusion

1.   The following are suggested formats for either a Certificate of Mailing or Certificate of Transmission under 37 CFR 1.8(a). The certification may be included with all correspondence concerning this application or proceeding to establish a date of mailing or transmission under 37 CFR 1.8(a). Proper use of this procedure will result in such communication being considered as timely if the established date is within the required period for reply. The Certificate should be signed by the individual actually depositing or transmitting the correspondence or by an individual who, upon information and belief, expects the correspondence to be mailed or transmitted in the normal course of business by another no later than the date indicated.

Certificate of Mailing

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to:

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I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office, Fax No. (703)_____ - _____ on _____.
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Please refer to 37 CFR 1.6(d) and 1.8(a)(2) for filing limitations concerning facsimile transmissions and mailing, respectively.

Any inquiry concerning this communication or earlier communications from the examiner should

be directed to Christopher M. Lambrecht whose telephone number is (703) 305-8710. The examiner can

normally be reached on 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the primary examiner,

Christopher Grant can be reached on (703) 305-4755. The fax phone number for the organization where

this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should

be directed to the receptionist whose telephone number is (703) 305-3900.

<div style="text-align: right">

Christopher M. Lambrecht
Examiner
Art Unit 2611

</div>

CML

CHRIS GRANT
PRIMARY EXAMINER